RECENT LIFE STRESS AND EGO STRENGTH IN HOSPITALIZED AND NON-HOSPITALIZED SUBJECTS

by

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TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

The focus of this study was to measure and describe the variables of recent life changes or stresses, and a measure of ego strength in a group of hospitalized subjects and a non-hospitalized group. This focus seemed relevant in light of increasing evidence which has suggested that a cluster of recent life events precedes physical or emotional illness. The purpose of the research was to look for relationships between the variables life stresses and ego strength.

The sample included two groups of hospitalized patients, psychiatric and medical-surgical, from in-patient units at the University Hospital in Salt Lake City, and one group of non-hospitalized individuals. The non-hospitalized sample was selected from visitors in the Outpatient Department of the University Hospital, from visitors to Cottonwood Hospital, a 157-bed private hospital, and from acquaintances of the investigator. The sample totaled 82, with 52 subjects in the hospitalized sample and 30 in the non-hospitalized sample. For inclusion in either sample, criteria were established: 1) must agree to participate in the study, 2) must be able to take a paper and pencil test and fill out the necessary forms, and 3) must be an adult not under 14 years of age. For the hospitalized sample, individuals were not considered if the diagnosis of illness were chronic with the exception of an acute exacerbation of the illness. The sample was selected over a four months' period of time according to the criteria established. There were no

limitations as to sex, age above 14 years, diagnosis, previous hospitalizations, or socioeconomic status.

The Schedule of Recent Experience (SRE) was used to measure the variable of recent life stresses or changes for the year prior to testing. The rating scale used to measure ego strength was the Ego Strength Scale (ESS) which purportedly was a measure of adaptive processes. An additional Biographical Information Form (BIF) was given to the subjects when the first two forms were filled out, for collection of demographic data.

The Pearson product-moment correlations indicated that ego strength (ES) was positively associated with age, and negatively associated with SRE scores ($p < .05$). Ego weakness was positively associated with SRE score and negatively correlated with the non-hospitalized group ($p < .001$). Age and SRE were negatively correlated ($p < .001$).

A oneway analysis of variance was computed. The F level indicated that the scores of the three groups were significantly ($p < .001$) different on the measure of EW, but not on the SRE or ES measures.

The *t* test was used for the third analysis of data to compare the means of the hospitalized group and the non-hospitalized group as well as the two hospitalized groups. Only the means of the two hospitalized groups were significantly different, and only on the EW and the SRE scores. This was an important finding and was discussed in terms of nursing intervention. The differences between the groups provided important input for further research, some of which were discussed in the report.

CHAPTER I

INTRODUCTION

Since the early 1950's an increasing amount of research evidence has linked stressful life situations with subsequent states of physical or emotional illness. Many findings have supported the hypothesis that significant alterations in an individual's environment, which require major changes or adjustments, precede occurrences of illness (Greene, 1954; Hawkins, Davies, & Holmes, 1957; Hinkle, Conger, & Wolf, 1950; Rahe & Holmes, 1965; Schmale, 1958; Stevenson & Graham, 1963; Theorell & Rahe, 1971).

While the evidence in support of the above hypothesis has grown, few studies have attempted to look at the variables associated with life stress; namely, that the response or adjustment to stress which precedes illness could be considered a maladaptive coping effort. Much discussion in the literature relative to stress has been concerned with the question of why some individuals encountering numerous life stresses suffer from emotional illness while others are afflicted with various physical diseases, and still others, experiencing similar difficult life situations, do not become ill. The relatively well individuals were of particular interest to the investigator in that they represent a source needed to identify specific strengths which would significantly differentiate them from individuals, who under stress become physically or emotionally ill.

Health maintenance and the prevention of illness are concerns of all health professionals. They particularly concern psychiatric nurses since they frequently have contact with patients experiencing stressful life crises situations. It was considered relevant by this investigator that the nature of the relationships between coping, life stress, and onset of illness be more definitively studied. Identification of recent life stresses and abilities to resolve stressful problems which influence health-illness processes could lend considerable assistance to locating high risk groups or those most vulnerable to illness. Further, it was assumed that the study might suggest ways of determining the direction an illness could take by differentiating those factors which support the maintenance of health and hence, of giving direction for appropriate crisis intervention.

The present study was, therefore, undertaken to identify associations among the variables. That is, the extent of recent life changes or stresses and ego strength in a group of hospitalized and a non-hospitalized group of people.

Two areas of study and research provided the theoretical rationale upon which the study was based. The first and most extensive subnect of concern was stress theory, which has grown out of studies relating to psychosomatic medicine. The second theoretical framework was that of ego psychology, or study of ego functioning and the achievement of adaptive balance in man, which the investigator considered relevant to the study of individuals' responses to stress.

Research in the area of psychobiology was generated in the late 1940's by Adolph Meyers (Lief, 1948) who developed the "life chart," a device for organizing medical data as a dynamic biography of an

individual. This tool provided a unique method for demonstrating schematically the relationship of biological, psychological, and sociological phenomena to the process of health and disease in man. Meyers, according to Lief (1948), stressed the importance of recording life events such as changes in habitat, of school entrance, graduations, promotions or failures, occupational change, and information regarding possibly important environmental influences.

In the following decades, the research in psychobiology, synthesized with the concepts of Freud, Pavlov, Skinner and Cannon, led to the cogent argument that "stressful" life events play an important role in the natural history of many diseases. The relevance of this for the study is that illness is a term applied broadly to any negative change in health status and includes a wide range of psychiatric, medical, and surgical disorders.

An abundance of research has been stimulated documenting the association of a subject's life stress, personal loss, life changes, and other measures of social change preceding the recognition of an individual's illness. The disease entities recognized have been such diverse illnesses as metabolic disease, infections, accidents, and exacerbations of congenital disorders (Greene, 1954; Hawkins, Davies, & Holmes, 1957; Hinkle, Conger, & Wolf, 1950; Rahe & Holmes, 1965; Rahe, McKean, & Arthur, 1967; Schmale, 1958; Stevenson & Graham, 1963; Theorell & Rahe, 1971).

Among others whose research supported the supposition that life stresses are associated with the occurrence of illness were Rahe, Meyer, Smith, Kjaer, and Holmes (1964). The purpose of the research they reported was to examine systematically the relationships of

environmental variables to the time of illness onset. Seven patient samples representing five distinct medical entities, and two control groups were studied. Data indicated that a cluster of social events requiring change in ongoing life adjustments was positively associated with the time of illness onset. It was then adduced from this study and others cited which gave supportive evidence, that the clustering of social or life events achieved etiologic significance as a necessary but not sufficient cause of illness. Thus, any environmental factors which significantly altered the equilibrium of the individuals were considered to increase the probability that the person's resistance to disease would be lowered, and could contribute to the onset of disease.

Further research yielded the numbers and types of events making up the clusters. These clinically observed events, termed life changes, were reported by the subject within a specific time period prior to the present illness and/or hospitalization. Two categories of items indicative of the life style of the individual and indicative of occurrences that involved the individual, were identified. These included: changes in family constellation, marriage, occupation, finances, residence, group and peer relationships, education, health and religion. Subsequent studies which attempted to estimate the weight of these events were required in order to bring greater precision to this area of research and to provide a quantitative basis for new, epidemiological studies of disease.

Out of these studies, completed at the University of Washington by Holmes and Rahe (1967), evolved the Social Readjustment Rating Scale (SRRS). The SRRS is a methodological approach to quantifying the degree or intensity of change inherent in life change events. The

events have been scaled, as a result of research methodology, and assigned values which are measured in life change units (LCU) (Masuda & Holmes, 1967a). This scaling instrument was then developed into a standardized, self-administered paper and pencil survey, the Schedule of Recent Experience (SRE) which lists the life changes by year of occurrence.

The emphasis on change, the theme of the life change events, and the evocation of adaptive or coping behavior on the part of the individual was important to the development of the research rationale utilized in this study. In the Holmes and Rahe studies of hospitalized patients demonstrating serious disorders, the relationship between type of events and type of illness, i.e., psychiatric or medical-surgical, was not questioned or reported. One study researched a sample of psychiatric patients but did not discuss the possibility of a pattern of life changes which had occurred with these subjects (Rahe, McKean & Arthur, 1967). Other studies were, and continue to be, concentrated on physical illness with few attempts to correlate specifically high LCU totals with either emotional or psychiatric disturbances. The emphasis in previous research was on the importance of the instrument in measuring the degree or intensity of change inherent in life events which evoked adaptation or coping by the individual, and clearly, by definition, made little attempt to clarify the coping mechanisms themselves.

Before the focus of research was narrowed to variables other than life events, the life stress and subsequent illness hypothesis had to be put to a prospective test in non-hospitalized populations. Until the early 1970's, few attempts had been made to predict how many LCU's a subject might experience and still remain relatively healthy. It was

from the early retrospective studies that the first quantitative estimate was made and the possibility for predictive value of the instrument was suggested. The majority of the 88 physician subjects sampled who recorded up to 150 LCU a year also reported good health the following year. Approximately half, or 49 percent, of the subjects who indicated that they had experienced yearly LCU values ranging between 150 and 300 LCU reported an illness during the following year. For the relatively few subjects who recorded over 300 LCU, an illness was reported during the following year in 70 percent of the cases (Rahe, 1972). Data were not presented indicating follow-up on the subjects who did not report illness, which in this instance was 30 percent of the sample. This was a limitation in the previous research and subsequent similar studies may reveal factors indicative of resistance to disease and contribute to existing rationales regarding the health maintenance.

The few attempts to assess and pursue following up the "well" sample, have given direction and focus for continued research and have contributed to the development of the present research question. Emphasis was placed on the problem and limitations of using situational stress as a precipitant of illness without concomitantly studying individual adaptative strengths as a variable.

Adaptation and coping have been more theoretically and less operationally well-defined than the theories of life stress. An extensive review of the literature revealed a scant number of studies which attempted to look at coping in relationship to stress. Adaptive processes were conceptualized by Jacobs, Pugatch, and Spilken (1968) as a model of "ego strength." In a separate study by Karush, Easser, Cooper, and Swerdloff (1964), attempts were made to define ego strength in terms

of adaptive balance. Difficulty occurred when the concept of ego strength was put to a clinical test, because the measure proved to be ambiguous and vague. Only by defining its meaning in standardized clinical terms and by developing scaled criteria for its evaluation could it be used as a reliable scientific instrument. The methodology included the objective ratings of ego strength from which a profile of characteristic patterns of coping could be determined.

Jacobs et al., (1968) postulated that the concept of ego strength comprised the "capacities to: 1) delay discharge of impulse without sacrificing spontaneity, 2) form and sustain interpersonal relationships, 3) function assertively and independently, and 4) perceive onself as esteem-worth. . . .. Ego pathology was conceived as a bipolar function, so that deviations might be expressed either in terms of too much or too little of a dimension [p. 297]." This theoretical construct is in keeping with the dimensions postulated by Karush et al., (1962), earlier, in their profile of adaptive balances. The adaptive patterns described by both research terms have theoretical commonalities; they are: 1) impulse control, 2) affective balance, 3) frustration tolerance, 4) dependence balance, 5) interpersonal and social interaction balance, and 6) self-esteem.

One study of seriously ill patients was directed toward answering the question of what types of coping behavior contributed to favorable outcomes. These following functions were identified: "keeping distress within manageable limits; maintaining a sense of personal worth; restoring relations with significant other people; enhancing prospects for recovery of bodily functions; and increasing the likelihood of working out a personally valued and socially acceptable

situation after maximum physical recovery has been attained [p. 277]" (Hamburg & Adams, 1967). These functions are similar to the dimensions of adaptation listed, and the similarity supports the theoretical base for the operationalization of the ego strength model.

The Ego Strength Scale (ESS) (Jacobs et al., 1968) was designed primarily to measure personality change as a result of psychotherapy. Secondly, the ESS was designed to provide a characteristic profile of pathology in coping mechanisms. A previous study (Jacobs, Muller, Eisman, Knitzer, & Spilken, 1967) reported that patients typically exhibited distortions in modes of adaptation which could be explicitly described using the Jacobs model of ego strength. The differentiation of functioning individuals from those incapacitated by emotional pathology was the aim of the original study developing the ESS. Data were presented which supported the assumption that it is possible to operationalize a theoretical model of ego strength and ego weakness into an objective rating scale.

Several studies, however, have used a combination of two other instruments, the Boston University Personality Inventory (BUPI) and the Manifest Affect Rating Scale (MARS) to measure dimensions of coping, which appeared on initial evaluation to be similar to those of the ESS (Jacobs, Spilken, & Norman, 1969; Spilken & Jacobs, 1971). In one of these studies, another test, the Adolescent Conflict Test (ACT), a projective measure for styles of coping, was added to the BUPI and the MARS although the SRE was not used. A life change inventory (LCI) suggested by the work of Holmes and Rahe on the SRRS, with 47 life situations selected for relevance to college students, was used. It was claimed that only dimensions of defiant, danger-seeking behavior (measured by

the BUPI) along with increased life stress, were found to differentiate between the two groups, one seeking relief from sore throats, and one group symptom free.

Since studies of college students may not be representative of the general population, and are not likely to include persons seriously ill with either psychiatric or physical problems, more evidence is needed to substantiate the assumption that maladaptive coping in the face of increased life stress is associated with illness behavior. The present study attempted to correct for these limitations, and those described earlier in the discussion, by trying to control for increased life stress scores in a "well" and an ill group and by using a sample not limited to college students. Based on a review of the relevant literature of retrospective studies using the SRE, it was expected that hospitalized individuals would manifest high recent life stress scores. It was hoped that a non-hospitalized group of individuals who may have had increased recent life changes could be found for the study.

Since the SRE was established as a valid and reliable measurement of recent life stress in research carried out with over 4,000 subjects over nearly ten years (Rahe, 1972), and the ESS appeared to be the best available rating to measure ego strength or adaptive processes, they were chosen as the instruments for this study.

The purpose of the study was therefore to describe two samples, one hospitalized, and the other non-hospitalized. The samples were first described retrospectively in terms of their recent life stress scores and then in terms of the measure of ego strength, a variable included for the purpose of comparing the samples.

Specifically, the objectives of this study were:

1. To measure the amount of recent life stress in hospitalized subjects, including psychiatric and medical-surgical patients.

2. To measure the amount of recent life stress in a non-hospitalized sample of subjects with increased life change over the year prior to testing.

3. To measure ego strength in the hospitalized and non-hospitalized subjects.

4. To study the association of recent life stress and ego strength to hospitalization and non-hospitalization.

The general hypothesis of this study was that in the face of increased recent life stress as measured by the SRE, maladaptive coping measured by both low ego strength and high ego weakness scores on the ESS is associated with hospitalization.

CHAPTER II

METHODOLOGY

Sample

The sample used for the study included two separate groups of hospitalized patients and a group of non-hospitalized individuals. The rationale for choosing hospitalized subjects was based on retrospective studies which indicated that hospitalized subjects had a high level of recent life stress as measured by the Schedule of Recent Experience (SRE) prior to their hospitalization (Holmes & Rahe, 1967).

The majority of the non-hospitalized sample were selected from visitors to hospitals. The rationale for selecting visitors was that if hospitalized patients had increased recent life stress, then family members were also likely to be experiencing increased life stress.

The in-patient units from which the hospitalized sample of 52 subjects was drawn, included a psychiatric unit, two medical units and two surgical units. Twenty-three patients were selected from the psychiatric unit, and the remaining 29 were selected from the medical and surgical units over a four-month period, January through April, 1974. For inclusion in the hospitalized sample, the following criteria were established: 1) must agree to participate in the study, 2) must be able to take a paper and pencil test and fill out an information form, 3) must be an adult patient not under the age of 14 years, 4) must not be an obstetrical patient, 5) must not be a prisoner from the State

Penitentiary, and 6) must not have a chronic illness unless the hospitalization is for an acute exacerbation of a chronic illness. The reasons for the first three criteria are obvious. The last three are for the following reasons: pregnancy has occurred as a result of recent life stress as well as being itself a stressful event, prisoners would be unavailable for follow-up study or information if needed, and illness in itself is a stressful life event. There were no limitations in age above 14 years, sex, diagnosis, number of previous hospitalizations, or socioeconomic status and occupation.

The non-hospitalized group was selected from individuals known to the researcher (N=5), as people who had recently had a family member hospitalized, and from among visitors to two hospitals (N=25). The size of the non-hospitalized subjects was 30. The two agencies used were Cottonwood Hospital, a 157-bed private hospital in Salt Lake City, and the Outpatient Department of the University Hospital. The sample was selected according to the following criteria: 1) must agree to participate in the study, 2) must be able to take a paper and pencil test and fill out an information form, and 3) must not be a patient waiting for a clinic appointment. The rationale for choosing visitors to hospitals was to find, possibly, a group of individuals with recent life stress comparable to the hospitalized group. Visitors would possibly be family members of patients and, therefore, have experienced life change events similar to, or the same as, patients, but who had evidently remained healthy.

The sample size was chosen to be as large as was feasible for an investigation of this kind in order to show statistically significant variance between groups on the variables studied.

Instruments

Three instruments were administered to the total sample of 82 including the hospitalized and non-hospitalized subjects. The Schedule of Recent Experience (SRE) (see Appendix A) was used to measure recent life events, and the second, the Ego Strength Scale (ESS) (see Appendix B), was used to assess adaptive processes or "ego strength." The Biographical Information Form (BIF) (see Appendix C) was utilized to collect additional data on socioeconomic variables such as parental education, occupation, etc. A third page of the BIF was used specifically for data from patients' charts, such as medications, diagnosis and illness history.

The SRE questionnaire was constructed in order to document systematically life events reported by subjects during the years prior to their illness (Hawkins, Davies, & Holmes, 1957). The design of the SRE includes a broad spectrum of individuals' recent life changes. "One theme common to these life events has been identified. The occurrence of each event called forth or was associated with some adaptive or coping effort on the part of the individual involved [p. 217]" (Holmes & Rahe, 1967). When the questionnaire was being developed, the interview technique was used to assess the meaning of an event to the individual. As was expected, the meaning of an event varied widely with the individual. It will be noted that only some of the events are negative or "stressful" in the conventional sense. Many are socially desirable and in keeping with the American values of success, achievement, materialism, future orientation, conformism, efficiency, and reliance on self.

In earlier years, allowances were not made for the relative

degrees of life change inherent in the different events listed in the Social Readjustment Rating Scale (SRRS). For example, death of a spouse and marriage were given the same weight. A scaling experiment was developed in 1964 to estimate the magnitude of the events listed in the questionnaire (Masuda & Holmes, 1967a).

From this experiment, a definitive method for quantifying the amount of change in life adjustment was established for each of the 43 items of the SRRS. The method consisted of a paper and pencil test, the Social Readjustment Rating Questionnaire (SRRQ), containing the items to be scaled. One item, marriage, was used as the index item. It had been arbitrarily selected and assigned a numerical value of 500. The subjects (N=394) were asked to compare each of the items in turn with the index and determine numerically whether its required "social readjustment" was proportionately greater or less than that of marriage. The arithmetic mean score derived for each item served as the number identifying the magnitude of change in adjustment required by the life event change. In 16 comparisons of mean item scorings of groups different in age, sex, marital status, education, social class, generation American, religion and race, the range of correlation coefficients (Pearson's r) was from 0.820 to 0.975, the average being 0.945. Spearman's rank order correlation coefficients were almost identical (Masude & Holmes, 1967a) to the results of the original scaling experiment.

Since this original scaling experiment, similar replications have been carried out in different parts of the United States and cross-culturally (Masuda & Holmes, 1967b). Results have been strikingly similar in each of these life changes scaling experiments. In 1972,

the results of a reliability study using the SRE with a sample size of 187 indicated a high correlation between this group's responses and the responses originally reported by Holmes and Rahe, despite differences in age and education. The reliability study involved four groups of subjects. In addition, one group was retested after a one-year time interval. The lowest correlation between subjects, by group, was 0.93 using Spearman's correlation coefficients (Mendels, 1972).

The practical results of these studies have been significant for the assessment and quantitative measurement of the average degree or intensity of change inherent in each life change event. The clarification of the weightings of the stressful events has made the SRE an invaluable research instrument.

In reviewing the early retrospective studies, Rahe (1972) found that they complemented one another in supporting the evidence of the pilot study with the 88 physicians. For all samples, it appeared that for those remaining healthy, their LCU total averaged approximately 150 for the prior year. When an individual reported an illness, his LCU total was often seen to be twice this healthy baseline value, or over 300 LCU per year. It was also reported that a build-up between 150-300 LCU over the year prior to illness was particularly noticeable during the final six-month interval. Therefore, for purposes of illness prediction, a subject's most recent (six-month) LCU totals appear to be the optimal ones to use (Rahe, 1972).

The present form of the SRE (1967) is a 42-item paper and pencil questionnaire consisting of two sections: a personal history section, and a recent experience section. The questions have to do with whether an event did or did not happen. The answer sheet is divided into two

sections, as is the questionnaire. In section two, the answer sheet has been separated into four time periods, 0-6 months, 6 months to 1 year ago, 1 to 2 years, and 2 to 3 years ago. For the first 12 of the 42 items, the respondent marks either yes or no under the appropriate time period the event occurred. In the present study, only the scores in the first two time periods were used. It was reasoned that if the summed results for the year were not significant, the results for a shorter time period would not be either. The SRE, along with complete instructions for hand scoring, is included in Appendix A.

A potential problem with this questionnaire may be some inaccuracy in an individual's memory for events. It is generally believed, however, that by virtue of the importance of an event to the individual it is likely to be remembered. Another potential problem may be a tendency for some subjects to either under-report or over-report, which was not controlled for in this study.

The ego strength scale developed by Jacobs et al, (1968) is a self-rating index of ego strength (ES) comprised of 50 items representing the 10 bipolar aspects of the theoretical construct "ego strength." Ten of the items are stated in a positive way, reflecting strength, and 40 are stated in a negative way, reflecting ego weakness (EW). The concept of the healthy level of ego functioning was based on whether or not coping mechanisms were evidenced appropriately, flexibly, or adaptively. Ego pathology was conceived to be a bipolar function, so that variations might be expressed in terms of either too much or too little of a dimension. Data have been presented which support the assumption that the scale measures aspects of personality which are meaningful in differentiating psychiatric patients from functioning

normals.

During the exploratory development of the ESS (Jacobs et al, 1968) wherein the items were chosen, 210 sample items were given to a group of psychiatrists and psychologists with instructions to identify the ES categories which the items represented. Those items which were consistently selected by seven of the eight panel members were then included on the basis of judgments of clinical appropriateness, non-offensiveness, and whether patients could be expected to acknowledge such qualities in themselves without undue defensiveness.

Included on the dimension of EW were 40 attributes considered as pathological when either too much or too little was evidenced. The alterations of the first attribute, impulse control (IC), were designated as "obsessive" or "compulsive." Alterations in interpersonal relationships (IR) were designated as "intrusive" or "isolated." The autonomy (A) dimension was conceived as pathological when it was either exaggerated, "defiant," or diminished, "submissive." Frustration tolerance (FT) varied in terms of "guardedness" and "vulnerability." Finally, self-esteem (SE) distortions were suggested to be either in the forms of "grandiosity" or in a sense of exaggerated "worthlessness." The following items were selected from the scale to illustrate items chosen for each of the 10 constructs:

1) IC-obsessiveness. When I have to decide something, I'm usually so confused that I end up doing nothing.
2) IC-impulsiveness. I don't like situations where I have to sit around and think; I prefer action and movement.
3) IR-intrusiveness. I find I'm constantly driven to seek out people to talk to.
4) IR-isolation. I withdraw from others and keep to myself as much as possible.
5) A-defiance. I often stick to my guns on issues even if people regard me as stubborn.

6) A-submissiveness. I am most comfortable in situations where I am told exactly what to do and what not to do.
7) FT-guardedness. There is almost nothing anyone can say which would upset me.
8) FT-vulnerability. I seem to get overwhelmed easily by relatively minor setbacks.
9) SE-grandiosity. I often insist that everything I do is top notch in spite of what some critics have said.
10) SE-worthlessness. No matter what I achieve, I feel thoroughly worthless.

Each item is rated on the basis of how the individual feels it applies to himself currently. The choice of five responses includes "most of the time" (score 4), "often," "occasionally," "rarely," and "never" (on a decreasing scale of 4 to 0). Each of the 10 concepts is represented by four items so that a scale is potentially scoreable from 0 to 16. Operationally if the 10 pathology scores are added together, a total "ego weakness" (EW) index is obtained with a potential score of 160. An eleventh scale, consisting of the remaining 10 of the 50 items positively worded, is also scored with a potential range from 0 to 40. This score represents aspects of ego strength. Examples of some of these items from the scale are: "I have no trouble getting a plan started and seeing it through." "I have my faults, but there are also some areas in which I excel." "I have no difficulty maintaining long-standing friendships." All items from both scales were taken directly from the ESS, which is found in Appendix B along with the complete scoring form.

Jacobs and his colleagues have concluded that all the items have good face validity as determined by judgments of a group of sophisticated raters. In the three original studies the ESS was used as a discriminating instrument among individuals with various levels of emotional pathology. Later researchers revised the ESS when a subscale

did not significantly differentiate psychiatric patients from functioning normals.

Overall, 113 of the 123 control group subjects scored below the criterion of 70 (92 percent) on the ego weakness dimension. Of the 45 psychiatric patients, 32 scored above the criterion (71 percent). The score differentiated between the controls and the patients in 86 percent of the cases.

The results of the testing on the ego strength indicated that 112 of the 123 normals scored 25 or above on this criterion (91 percent). This dimension, however, discriminated 80 percent of the cases accurately and is significant at the .001 level (Jacobs, 1968, p. 303).

Correlational results comparing the scores for each subject on each scale, the ego weakness and ego strength, generally indicated that the higher the ego weakness score the lower the score on ego strength tended to be, a significant negative correlation. The identical findings in each of the replicated studies indicated that the instrument has acceptable validity and reliability.

The limitations of self-rating scales generally apply to the ESS. It is assumed that unmotivated patients may cover up, deny pathology, or generally purport to be doing well. Patients with thought disorders may become confused during testing or may not understand the items. In general, individuals, either psychiatric patients or functioning normals, who fear revealing pathology may not present a true picture of themselves.

Subsequent studies which used the instrument have been limited and have not necessarily increased the reliability of the scales measuring faulty styles of coping of psychiatric patients. The studies did

not increase the reliability of the ESS because the patients were rated on specific dimensions of the EW aspects of the scale, not on the scale as a whole. These studies also tended to focus on utilizing the ESS in order to assess change during hospitalization, rather than emphasizing measurement of ego strength per se (Jacobs, Muller, Skinner, Anderson, & Spilken, 1971a; 1971b).

The purpose of the BIF was to collect the demographic and sociologic information which was not requested on the personal history section of the SRE. The information was collected to determine the extent to which it influenced the major variables. The BIF is included in Appendix C.

Data collection

Permission to do the study was obtained from the necessary agencies. The sample was not randomly selected, rather subjects were chosen from the available populations at the time the researcher was available to collect data. The researcher reviewed the lists of patients from the records available in the in-patient units. Patients, who fit the criteria established for the study, were identified and the charge nurse on the shift was asked to select those patients from the list she believed were physically and/or mentally able to participate in the study. These patients were asked if they would be willing to participate in the research study. Patients who agreed to participate were requested to fill out the SRE, ESS, and BIF. Patients were informed that all information would be kept strictly confidential. Information was taken from the patients' charts by the investigator to complete page 3 of the BIF. Verbal directions, as well as written instructions printed on the top of each questionnaire, were given to

the patients and all questions were answered. Subjects required approximately 30 minutes to complete the required forms. The investigator checked with the patients frequently to ensure that directions were being followed and answered questions raised by the subjects. The most frequent questions were asked about the ESS. The frequent contacts with the subjects were particularly necessary with psychiatric patients, who would often become confused or needed support. If any patient became unusually anxious or upset, or if there were any interruptions, the data collection was postponed and a more advantageous time scheduled. Generally, the hospitalized subjects were contacted in the evening after the dinner hour at a time when there were few visitors, activities, or interruptions.

The same general procedure was used in collecting data from the non-hospitalized subjects with the exception that the visitors, or those waiting for out-patients, were approached directly and asked if they would be willing to participate in the study. Occasionally individuals left before completing the forms, which prolonged the time needed to collect the necessary data. The remaining five subjects included in the non-hospitalized sample were known to the investigator as people who had recently had a family member hospitalized and who agreed to participate at their own convenience. The instructions given to these subjects were the same as those given to the rest of the subjects.

CHAPTER III

RESULTS AND DISCUSSION

To demonstrate general trends among the scores of subjects in each group, the means of the main variables studied, age, ego strength, ego weakness, and recent life stress as measured by the Ego Strength Scale (ESS) and the Schedule of Recent Experience (SRE) are shown in Table 1. The groups designated in the table are as follows:

Group 1 (N = 23) - hospitalized psychiatric patient subjects

Group 2 (N = 29) - hospitalized medical-surgical patient subjects

Group 3 (N = 30) - non-hospitalized subjects.

The subjects were also compared on the basis of hospitalized versus non-hospitalized subjects, with the former being Group A (N=52), and the latter being Group B (N=30).

For the analysis of data, the University of Utah Computer Center (UU/CC) and a Univac 1108 Computer were used. Programs used from the Statistical Package for the Social Sciences (SPSS) included "Pearson Corr" for correlation studies, "Oneway" for analyses of the variance between the groups.

Group 1 had a mean age of 29.6 years; Group 2, 39 years; and, Group 3, 34 years. The range was 17 to 58 years for the former group, and was 15 to 63 years for the latter. The differences in age between the groups were not statistically significant.

The total hospitalized group consisted of 23 males (44 percent)

TABLE 1

ES, EW, SRE, and Age Means, Standard Deviations and Ranges for All Subjects (N=82)

Variables	Source	Means	S.D.	Ranges
ES	Group 1	26.4	6.22	15.0 - 38.0
	Group 2	27.1	8.49	4.0 - 31.0
	Group 3	28.3	5.70	17.0 - 37.0
EW	Group 1	81.5	15.13	61.0 - 122.0
	Group 2	57.0	19.40	11.0 - 93.0
	Group 3	64.2	14.36	30.0 - 90.0
SRE	Group 1	520.6	341.17	200.0 - 1449.0
	Group 2	338.2	211.30	35.0 - 1018.0
	Group 3	426.8	280.33	31.0 - 1174.0
Age	Group 1	29.6	11.09	17.0 - 54.0
	Group 2	39.0	16.05	21.0 - 61.0
	Group 3	34.2	12.3	15.0 - 63.0

and 29 females (56) percent). Within the hospitalized group, Group 1 had 16 females and 7 males, and Group 2 had 13 females and 16 males. The non-hospitalized group consisted of 13 females (43 percent) and 17 males (57 percent).

The analyses determined the degree of relationship among the major variables in the study, namely ego strength, ego weakness, and recent life stress scores and the demographic data. Such factors as age, sex, group, marital status, number living in household, number of previous hospitalizations were included in the data analyses. Pearson product-moment correlation coefficients were computed and reported in Table 2 (Guilford, 1956, pp. 579, 589).

Several correlation coefficients were statistically significant. For the total sample, ES correlated ($r = -.220$, $p < .05$) with recent life stress, that is, the higher the ES score the lower the recent life stress score on the SRE. On the other hand, EW was positively correlated ($r = .356$, $p < .001$) with SRE scores. Since the SRE was used as a retrospective tool to measure stress which occurred during the year prior to testing, and the ESS was used as a present measure of an individual's ego strength, or adaptive processes, assumptions cannot be made that one measure was a function of the other. One can only suggest that they were significantly associated at the time of testing.

Another correlation of interest was the negative correlation ($r = -.334$, $p < .001$) of EW with Group 1 when the groups were designated as: 1, 2, or 3. It was anticipated that the higher EW score would be negatively correlated with the psychiatric group (1) or, conversely, the lower EW score would be negatively associated with the non-hospitalized group (3).

TABLE 2

Statistically Significant Correlation Coefficients among Variables within Total Sample (N=82)

Variable Pair	Correlation
ES and Age	.266*
ES and SRE	-.220*
EW and SRE	.356***
EW and Group 1	-.334**
Age and SRE	-.503***
Number of Hospitalizations and Sex (male)	.307**
Number of Hospitalizations and Birth Order	-.237*

* $p < .05$
** $p < .01$
*** $p < .001$

Other interesting correlations which were not accounted for were found: Age and SRE scores were correlated negatively ($p < .001$), number of hospitalizations were positively correlated with sex ($p < .01$), and the number of hospitalizations correlated negatively with birth order when first born was coded as 1.

The results of the statistical analyses were concerned with the specific purposes of the study which were: to determine the amount of recent life stress in hospitalized psychiatric and medical-surgical subjects; to determine the amount of recent life stress in a non-hospitalized sample; and third, to determine the extent of ego strength in both the hospitalized and non-hospitalized subjects. Then, the comparisons of the groups were interpreted. The results showed that, on the whole, the hospitalized subjects had a higher rate of recent life stress for a 12 month period than the non-hospitalized subjects. When the subgroups were compared, however, the mean of Group 3 was higher than the mean of Group 2 on the SRE scores. This difference was not anticipated since evidence in the literature suggested that hospitalized or ill individuals have higher SRE scores than non-hospitalized individuals. However, the difference was not statistically significant. The mean of Group 1 was the highest of the three groups, and Group 2 the lowest.

On the ES measure, each group, starting with Group 1, had an increasingly higher average score. The follow-up analysis of variance, however, indicated that the differences between the means were not significant. This was not anticipated because the authors of the ESS indicated that the scale would discriminate with an average score below 25 for psychiatric patients.

TABLE 3

Analysis of Variance Between All Groups
on ES, EW, and SRE Scores

Variables	Source	df	Mean of Squares	F-Ratios
ES	Between Groups	2	24.5	.507 (NS)
	Within Groups	79	48.3	
	Total	81		
EW	Between Groups	2	3978.9	14.573*
	Within Groups	79	273.0	
	Total	81		
SRE	Between Groups	2	213812.3	2.774 (NS)
	Within Groups	79	77089.1	
	Total	81		

* $p < .001$
(NS) = Not significant

Interestingly, the other aspect of the ESS, ego weakness, differentiated between groups with an F-ratio of 14.5, which was significant at less than the .001 level of confidence. Group 3 again manifested a higher score than the medical-surgical group on this scale, which was not accounted for by other than the possibility that Group 3 was in some way not representative of non-hospitalized individuals.

The t test was used for the third analysis of the data (Phillips & Thompson, 1967, Ch. 14). Whereas the F-ratio customarily is used to handle comparisons between more than 2 groups at one time, the t test is used to compare the means of two groups. The means and t values between hospitalized and non-hospitalized groups are shown in Table 4, and the means and t values between the psychiatric group and the medical-surgical group are found in Table 5. The results of these analyses were related to the first and fourth purposes of the study, which were to study the relationship of recent life stress and ego strength to hospitalization and non-hospitalization, including within the hospitalized subjects.

The results shown in Table 4 suggest that the hospitalized and the non-hospitalized samples may not have been significantly different on any of the major variables. It appeared that the non-hospitalized group was not significantly different from the hospitalized group on the primary variables measured. These results, combined with the results in Table 3, were an indication that further comparison of Group 3 with the subgroups of the hospitalized sample would not have yielded significant findings. However age, as well as other variables not analyzed in depth, may have suppressed significant relationships.

The results in Table 5 indicated that the medical-surgical

TABLE 4

Means and t Values between Hospitalized and Non-Hospitalized Subjects on ES, EW, and SRE Scores

Variables	Source	Means	df	t Values
ES	Group A	26.8	80	-.95 (NS)
	Group B	28.3		
EW	Group A	67.9	80	.84 (NS)
	Group B	64.2		
SRE	Group A	418.9	80	-.12 (NS)
	Group B	426.8		

(NS) = Not significant

TABLE 5

Means and t Values between Psychiatric and Medical-Surgical Groups on ES, EW, and SRE Scores

Variables	Source	Means	df	t Values
ES	Group 1	26.4	50	-.33 (NS)
	Group 2	27.1		
EW	Group 1	81.5	50	4.97**
	Group 2	57.0		
SRE	Group 1	520.6	50	2.37*
	Group 2	338.2		

* $p < .025$
** $p < .001$
(NS) = Not significant

subjects and the psychiatric subjects averaged less than one point difference on the ES measure, which was not significant at less than the .05 level of confidence. The other measure of the ESS, the EW score, did significantly differentiate the psychiatric group from the medical-surgical group. The psychiatric group, as anticipated, had the highest EW score. The medical-surgical group had the lowest of the two groups, with means of 81 and 57 respectively. (The established criterion for discriminating psychiatric patients from "normals" was 70 or above.)

Not only did the EW measure significantly differentiate the hospitalized groups, but also the SRE scores significantly differentiated between Groups 1 and 2. Again, the psychiatric group had the highest score with a mean SRE of 520 and the medical-surgical group was the lowest with a mean of 338.

It was interesting to note in these that Group 3 scored between Groups 1 and 2 on the EW and SRE measures. There were possible explanations for these results. The non-hospitalized sample may not have been representative of the general population. For example, there were two subjects in Group 3 who had been hospitalized within three months prior to testing and who had SRE scores over 600 for the prior year. A larger non-hospitalized sample may have been required to differentiate the groups on this measure.

Thus far, data have been presented to describe the samples of hospitalized and non-hospitalized subjects. The general hypothesis was that in the face of increased life stress, as measured by the SRE, illness is associated with maladaptive coping reflected by low ego strength and high ego weakness scores on the ESS. In part, the data supported the general hypothesis. Only the dimension of ego weakness

differentiated between the three groups at the time of testing, however, and not the dimension of ego strength. It appears that the EW scale could be a more discriminating measure than the ES dimension because the number of items reflecting weakness totals 40 compared with 10 items reflecting strength on the ESS.

The fact that these groups were unusually different on the ego weakness scores and the recent life stress scores at the time of testing was an important finding. The medical-surgical subjects evidenced less ego weakness and more ego strength, whereas the psychiatric subjects manifested more ego weakness and less ego strength. These differences should give considerable direction to nurses caring for any patient. For example, the ESS describes specific attributes which are either excessively demonstrated or are lacking in the patient. Therefore, the ESS could be used more widely on all in-patient units as an initial assessment tool for identifying specific dimensions of ego functioning. The nurse could have access to an objective rating of ego strength from which to determine the patient's strengths. Conversely, ego weakness scores would give information for planning appropriate nursing interventions. The ESS may also serve as a basis for identification of those psychiatric patients who, with increased ES, may respond more quickly to treatment, or those who should be considered only for long term therapy (Jacobs et al., 1968). For those individuals who may be seen in crisis, strengths could be assessed which would be supported to encourage adaptive resolution of the crisis situation. However, further study of the ESS measure in relationship to hospitalized, non-psychiatric patients is indicated.

The implications of the high SRE scores in the study sample,

that is those above the level established in the pilot studies, suggest that further investigations utilizing this measure would be worthwhile in order to establish a predictive criterion measure. The level established in the pilot studies reported suggested that 70 percent of those with scores for a year's time above the 300 mark would become ill. Retrospective studies similar to the pilot studies also suggested that as the SRE scores increased, the individuals had multiple illnesses as well as increasingly serious illnesses (Rahe, 1972). Considering the mean of the psychiatric patients in the present study on the SRE score, it would appear that they are a high risk group in terms of future vulnerability to multiple illness. With few exceptions, the psychiatric patients had not been hospitalized within six months to one year prior to the present hospitalization and therefore, the period of time "at risk," in fact, would be the year following the time of testing. These individuals would be important to follow in terms of supportive care for the prevention of illness. This would be particularly important in terms of their high EW scores.

For the same reasons, i.e., high SRE scores, the non-hospitalized group would be considered an "at risk" group for the year following testing, although generally they manifested more normal scores on the ESS. It was questioned if this particular non-hospitalized group was really representative of the local population or more specifically representative of visitors to any hospital.

Other sociological data, which may or may not have influenced the major variables in the present study, were collected, but for the purpose of this study were not analyzed. The data are available for

further analyses in determining norms on the ESS and SRE relative to the demographic variables.

CHAPTER IV

SUMMARY AND RECOMMENDATIONS

In light of increasing evidence which has linked stressful life situations with subsequent states of physical or emotional illness, it seemed essential to the investigator that nurses continue to be informed about factors which have relevance to health promotion and well being. Information contributing to the identification of the illness vulnerable person and to health maintenance would be particularly useful to professionals concerned with the primary prevention of illness. Psychiatric nurses are frequently in contact with individuals experiencing significant alterations in their environment, such as life crises. Therefore, they have many opportunities to provide preventive care and offer health promotion services.

While evidence in support of the assumption that life changes which require major adjustments on the part of an individual often precede the occurrence of illness is noteworthy, few researchers have attempted to describe the variables associated with life stress. The investigator was particularly interested in measuring adaptive efforts, defined in this study as ego strength, in relation to the amount of life stress experienced by an individual. Previous research suggests that when adaptive efforts are faulty, there is a decreased resistance to illness. However, the majority of research studies have emphasized various aspects of stress theory without concomitantly studying adaptive

response as a significant intervening variable in the occurrence of illness.

The focus of the present study was to measure the extent of recent life changes or stresses and ego strength among a group of hospitalized subjects and a non-hospitalized group of subjects. The study was also undertaken to study relationships between "life stresses" and "ego strength."

A tool for measuring ego strength was conceptualized by Jacobs et al., (1968) in terms of adaptive processes, and therefore seemed relevant and useful for this study. The Ego Strength Scale (ESS) is an objective rating scale designed to measure ego strength and several dimensions of ego weakness. The basic research question of this study was to determine if in the face of increased recent life stress, as measured by the Schedule of Recent Experience (SRE), and maladaptive coping, as measured by both low ego strength and high ego weakness on the ESS, are associated with illness behavior, hospitalization.

The sample used for the study included two separate groups of hospitalized patients and a group of non-hospitalized individuals. The rationale for choosing hospitalized subjects was based on retrospective studies which indicated that hospitalized subjects had increased SRE scores. The present study attempted to select subjects expected to have high stress levels in order to compare high SRE scores to the scores on a measure of ego strength. The sample of hospitalized subjects was selected from the psychiatric unit and from medical and surgical in-patient units. The non-hospitalized subjects were selected from among visitors to hospitals on the supposition that if the visitors were close associates or family members of the patients, the visitors

would be experiencing stressful events not unlike those of the patients. The total sample consisted of 82 subjects: 52 were hospitalized and the other 30 were not hospitalized. All subjects were administered the SRE to measure recent life changes, the ESS to measure ego strength or adaptive processes, and an information form for the compilation of demographic data.

The critical findings were that the two groups of hospitalized subjects were significantly different on the ego weakness measure of the ESS and for the year prior to testing on the SRE scores. The medical-surgical subjects evidenced less ego weakness and more ego strength, whereas the psychiatric subjects manifested more ego weakness and less ego strength. The differences on the ego strength dimension, however, were not statistically significant. The psychiatric group was unusually high on the SRE score also. Although the medical-surgical group had a mean score above the suggested predictor level of 300, the mean SRE score, as well as was the mean of the EW measure, was lower for this hospitalized subgroup than for the non-hospitalized group. Data showed that the means of the non-hospitalized group on the EW and the SRE scores fell between the means of the two hospitalized groups on those measures.

When compared on the major variables, the hospitalized subjects and the non-hospitalized subjects showed no statistically significant differences. It may have been helpful to study in more depth the relationship of each of the subgroups of hospitalized subjects to the non-hospitalized subjects on the major variables.

The limitations of the study are the needs for follow-up studies to establish the empirical validity of the ESS. Since the ESS was

developed to measure ego strength as it changed over time, it may not be a sensitive measure on enduring ego strength traits. Whereas, the SRE was a retrospective measure of life changes and therefore, any associations between ego strength and recent life changes could only be made for the point in time of the testing. Inferences cannot be made pertaining to a subject's ego strength at the time of the life event changes. It would be important to find some instrument which measured enduring patterns of ego strength or functioning.

An unexpected difficulty was in obtaining subjects from the psychiatric unit satisfying the criteria for sampling. The sampling for all subjects was difficult to control in terms of criteria established. For example, non-hospitalized subjects, after being tested, were found to have had recent hospitalizations. Also, in sampling hospitalized subjects at the University Hospital, it was difficult to find subjects who were not chronically ill and who had not been hospitalized recently. This was especially so for patients on the psychiatric unit. It would have been important also to keep track of the numbers of individuals who refused to participate in the study and reasons for the refusals.

The findings of this study suggest several areas for additional studies and particularly for longitudinal studies. There is a need to establish norms for both the hospitalized and non-hospitalized groups for this region. This would require a large sample and a variety of settings utilized for data collection. It would be helpful to have norms representative of the locality, since the University Hospital is primarily a specialty hospital and the patient population may not be typical of patients in other community hospitals. Other data collected on the Biographical Information Form (BIF) could be further analyzed for

its usefulness, particularly in studying hospitalized patients, in order to clarify the associations of SRE and ESS with other variables such as diagnosis, socioeconomic status, medications, and length of illness.

Data collected on the numerous other variables, particularly age, which was not analyzed in more depth, was a limitation of this study. There may have been some variables suppressing the relationships among major variables measured by ES, EW, and SRE scores. Analysis of these variables would have provided more information to describe this particular sample.

The present study provides an initial data base for other studies. For example, within the hospitalized subgroups, more specific analyses of the data collected could be done in order to study the traits and responses of psychiatric with medical-surgical patients more thoroughly. This preliminary work may assist in identifying trends associated with the determination of one's becoming emotionally rather than physically ill.

A further extension of the present study would be to analyze the categories of life events on the SRE in relation to differences between the non-hospitalized, the psychiatric, and the medical-surgical groups. This analysis is important because the variation between the hospitalized groups on the SRE was statistically significant. The categories of events referred to are those having to do with family, personal data, work, or finances.

Another focus for future research is indicated since the EW dimension of the ESS was a measure which significantly discriminated between the psychiatric and medical-surgical patients. There is no

evidence in the literature that the ESS has been used with subjects other than psychiatric patients, and its usefulness with the medical-surgical group would be important to establish. Since the ES dimension did not discriminate significantly between the groups, that dimension of the tool could be utilized in experimental studies designed to expand the 10 items reflecting ego strength to be in balance with the 40 item ego weakness scale.

The above recommendations could be pursued beginning with the data collected in this study. The information could be valuable in more clearly defining the specific variables of life stress and ego strength in relationship to ill and "well" subjects. The fact findings would have the potential of contributing to the ability of health professionals to assess high risk groups in terms of their needs for programs of primary prevention of illness or health promotion.

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APPENDIX A

SCORING KEY

VALUES OF QUESTIONS ON SCHEDULE OF RECENT EXPERIENCE (SRE)

No.	SRE Question	Mean Value
1	Trouble with boss	23
2	Change in sleeping habits	16
3	Change in eating habits	15
4	Revision of personal habits	24
5	Change in recreation	19
6	Change in social activities	18
7	Change in church activities	19
8	Change in number of family get-togethers	15
9	Change in financial state	38
10	Trouble with in-laws	29
11	Change in number of arguments with spouse	35
12	Sex difficulties	39
13	Personal injury or illness	53
14	Death of close family member	63
15	Death of spouse	100
16	Death of close friend	37
17	Gain of new family member	39
18	Change in health of family member	44
19	Change in residence	20
20	Jail term	63
21	Minor violations of the law	11
22	Business readjustment	39
23	Marriage	50
24	Divorce	73
25	Marital separation	65
26	Outstanding personal achievement	28
27	Son or daughter leaving home	29
28	Retirement	45
29	Change in work hours or conditions	20
30	Change in responsibilities at work	29

No.	SRE Question	Mean Value
31	Fired at work	47
32	Change in living conditions	25
33	Wife begin or stop work	26
34	Mortgage over $10,000	31
35	Mortgage or loan less than $10,000	17
36	Foreclosure of mortgage or loan	30
37	Vacation	13
38	Change in schools	20
39	Change to different line of work	36
40	Begin or end school	26
41	Marital reconciliation	45
42	Pregnancy	40

Section 1, Personal History (Side 1, blue)

Please print in your name, address, today's date, birth date and occupation. All other questions are answered by blacking out the box beside the proper response under each of the headings in the blocks. Each question in this section has one answer that is appropriate so *do not leave any unanswered.*

Example:

RELIGIOUS PREFERENCE

PROTESTANT
■ CATHOLIC
JEWISH
OTHER
NONE

This means that your religious preference is Catholic.

Section 2, Recent Experience (Side 2, green)

Part A (Items 1 through 12)

This section of the questionnaire is different from the first section in 3 ways: first, the questions have to do with whether an event did or did not happen and when; second, the questions to be answered are written only in this instruction booklet; third, the answer sheet (Side 2) has been separated into the following 4 time periods:

0 to 6 mo ago *6 mo to 1 yr ago* *1 to 2 yrs ago* *2 to 3 yrs ago*

For each numbered question in the booklet:

1. Think back on the item event and decide if it happened to you and when it happened.
2. If the event in question did happen in any of the time periods, mark the answer by blacking out the "yes" bracket in the appropriate time period. Y means Yes.
3. If the event in question did not happen in any of the time periods, mark the answer by blacking out the "no" bracket in the appropriate time period. N means No.

When in doubt of the event happening, then mark in the "yes" bracket. If you are not certain of the time period, do not worry; just try to be as close as possible. *There must be a mark in each time period.*

Example:

Item No.	(Trouble with boss)	0-6 MO	6 MO-1 YR	1-2 YR	2-3 YR
1.		N	Y ■	Y ■	■ N

This means that you have had trouble with the boss in the last 6 months and between 2 and 3 years ago, but not 6 months to a year ago or 1 to 2 years ago.

Item Number

1. Mark under the appropriate time periods when there has been either a lot more or a lot less trouble with the boss.
2. Mark under the appropriate time periods when there was a major change in sleeping habits (sleeping a lot more or a lot less, or change in part of day when asleep).
3. Mark under the appropriate time periods when there was a major change in eating habits (a lot more or a lot less food intake, or very different meal hours or surroundings).
4. Mark under the appropriate time periods when there was a revision in your personal habits (dress, manner, associations, etc.).
5. Mark under the appropriate time periods when there was a major change in your usual type and/or amount of recreation.
6. Mark under the appropriate time periods when there was a major change in your social activities (e.g., clubs, dancing, movies, visiting, etc.).
7. Mark under the appropriate time periods when there was a major change in church activities (e.g., a lot more or a lot less than usual).

8. Mark under the appropriate time periods when there was a major change in number of family-get-togethers (e.g., a lot more or a lot less than usual).
9. Mark under the appropriate time periods when you had a major change in financial state (e.g., a lot worse off or a lot better off than usual).
10. Mark under the appropriate time periods when you had in-law troubles.
11. Mark under the appropriate time periods when you had a major change in the number of arguments with spouse (e.g., either a lot more or a lot less than usual regarding child-rearing, personal habits, etc.).
12. Mark under the appropriate time periods when you had sexual difficulties.

Part B (Items 13 through 42)

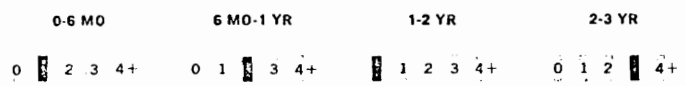
This part of Section 2 is similar to Part A, *except* that the question now asks you to indicate the *number of times* that an item event happened in each of the appropriate time periods.

Each of the time period columns has brackets numbered 0, 1, 2, 3, 4+. The last, 4+, means 4 or more. These numbers represent the number of times the event happened. If the event did not happen, mark the "0" bracket. *There must be a mark in each time period.*

Example:

Item No. (Change in residence)

19.



This means that you changed residence once in the last 6 months, twice 6 months to 1 year ago, three times between 2 and 3 years ago, but did not change residence 1 to 2 years ago.

Item Number

13. Mark the number of times in each appropriate time period that you experienced major personal injury or illness.
14. Mark the number of times in each appropriate time period that you have lost a close family member (other than spouse) by death.
15. Mark the number of times in each appropriate time period that you have experienced the death of spouse.
16. Mark the number of times in each appropriate time period that you have experienced the death of a close friend.
17. Mark the number of times in each appropriate time period that you have gained a new family member (e.g., through birth, adoption, oldster moving in, etc.).
18. Mark the number of times in each appropriate time period that there has been a major change in the health or behavior of a family member.
19. Mark the number of times in each appropriate time period that you have had a change in residence.
20. Mark the number of times in each appropriate time period that you have experienced detention in jail or other institution.
21. Mark the number of times in each appropriate time period that you have been found guilty of minor violations of the law (e.g., traffic tickets, jay walking, disturbing the peace, etc.).
22. Mark the number of times in each appropriate time period that you have undergone a major business readjustment (e.g., merger, reorganization, bankruptcy, etc.).
23. Mark the number of times in each appropriate time period that you married.
24. Mark the number of times in each appropriate time period that you were divorced.
25. Mark the number of times in each appropriate time period that you had marital separation from your mate.
26. Mark the number of times in each appropriate time period that you had an outstanding personal achievement.
27. Mark the number of times in each appropriate time period that you had a son or daughter leaving home (e.g., marriage, attending college, etc.).
28. Mark the number of times in each appropriate time period that you have experienced retirement from work.
29. Mark the number of times in each appropriate time period that there was a major change in working hours or conditions.
30. Mark the number of times in each appropriate time period that you had a major change in responsibilities at work (e.g., promotion, demotion, lateral transfer).

31. Mark the number of times in each appropriate time period that you have been fired from work.
32. Mark the number of times in each appropriate time period that there was a major change in living conditions (building a new home, remodeling, deterioration of home or neighborhood).
33. Mark the number of times in each appropriate time period that your wife began or ceased working outside the home.
34. Mark the number of times in each appropriate time period that you took on a mortgage greater than $10,000 (e.g., purchasing a home, business, etc.).
35. Mark the number of times in each appropriate time period that you took on a mortgage or loan less than $10,000 (e.g., purchasing a car, T.V., freezer, etc.).
36. Mark the number of times in each appropriate time period that you experienced a foreclosure on a mortgage or loan.
37. Mark the number of times in each appropriate time period that you have taken a vacation.
38. Mark the number of times in each appropriate time period that you have changed to a new school.
39. Mark the number of times in each appropriate time period that you have changed to a different line of work.
40. Mark the number of times in each appropriate time period that you have begun or ceased formal schooling.
41. Mark the number of times in each appropriate time period that you had a marital reconciliation with your mate.
42. Mark the number of times in each appropriate time period that you had a pregnancy.

APPENDIX B

EGO STRENGTH SCALE

NAME_____ DATE_____

The following are statements which people have made about themselves. Read each item and decide whether or not it applies to you during the past week. If it does, indicate to the right of the statement, by filling in the correct space, whether it is true of you (A) MOST OF THE TIME, (B) OFTEN, (C) OCCASIONALLY, or (D) RARELY. If it does not apply to you at all, fill in the space (E) NEVER, to the right of the statement.

Work quickly and do not skip any items. Your first impression is usually the best. It is important that you evaluate yourself as frankly as possible. All information obtained will be kept in strictest confidence.

1. I have no trouble getting a plan started and seeing it through. A B C D E

2. I don't care to be around people and prefer to remain alone. A B C D E

3. I consider myself to be an active and assertive person. A B C D E

4. So many things upset me, it always amazes me that I manage to do what has to be done. A B C D E

5. I realize that there are things I do well, but in most areas I feel quite useless. A B C D E

6. Practically speaking, people can be of great help to me, and I try to know as many as possible. A B C D E

7. There is almost nothing anyone can say which would upset me. A B C D E

8. Confusing thoughts run through my mind when I sit down to work or study, so that I can't concentrate. A B C D E

9. I find that when I'm with other people, there is little I can say to influence them; somehow they always seem to know what is best for me better than I. A B C D E

10. I have my faults, but there are also some areas in which I excel. A B C D E

11. I often insist that everything I do is top notch in spite of what some critics have said. A B C D E

12. It's very hard for me to go into new groups of people. A B C D E

13. I don't get frustrated very easily; I find that even if things seem upsetting at the moment, I can usually handle them. A B C D E

14. All anyone has to do to start a fight with me is to try to give me orders. A B C D E

15. I tend to foul things up by rushing into a situation when I should have given it some thought first. A B C D E

16. I am easily discouraged and have to seek out praise in order to feel I've done a job right. A B C D E

17. I have never been a leader, and when people try to push responsiblity on me, I find I don't know what to do. A B C D E

18. I seem to get overwhelmed easily by relatively minor setbacks. A B C D E

19. I feel like a real failure who can't do anything right. A B C D E

20. I consider myself to be very competent and don't mind who knows it. A B C D E

21. I like to plan carefully before taking action and even then feel uneasy about what I have done. A B C D E

22. I find I'm constantly driven to seek out people to talk to. A B C D E

23. Although I have a hard time with some things I'd like to be able to do, for the most part, I feel I manage pretty well. A B C D E

24. I feel very uncomfortable making new friends or meeting new people. A B C D E

25. I am most comfortable in situations where I am told exactly what to do and what not to do. A B C D E

26. I openly express my true feelings to my close friends and let them know when I am hurt, disappointed, or angry. A B C D E

27. I don't feel the need to jump into things but approach them gradually and surely. A B C D E

28. I often stick to my guns on issues even if people regard me as stubborn. A B C D E

29. I often play down my true feelings and make believe I "don't care." A B C D E

30. I often do things which seem exciting even though I realize that I will get into trouble later but I can't seem to stop myself. A B C D E

31. I can do most things right and like others to know about it. A B C D E

32. I am quick to show my hurt feelings; people regard me as sensitive and easily reached. A B C D E

33. I have to be in the center of things with people all around me. A B C D E

34. I prefer to allow others to be leaders or bosses, but I sometimes question their decisions. A B C D E

35. It is not hard for me to make friends with whom I can feel close. A B C D E

36. I tend to think through any decision I make very carefully; sometimes people get annoyed because I take so long to make up my mind. A B C D E

37. I try to live by the code that you should never let others see your real feelings. A B C D E

38. I am not content in a situation unless I can get others to do what I want them to do; I am not comfortable unless I'm in complete charge of things. A B C D E

39. When I have to decide something, I'm usually so confused that I end up doing nothing. A B C D E

40. I don't like situations where I have to sit around and think; I prefer action and movement. A B C D E

41. I withdraw from others and keep to myself as much as possible. A B C D E

42. I have the feeling I can accomplish anything I want; no one can interfere. A B C D E

43. I have no difficulty maintaining long-standing friendships. A B C D E

44. I can't stand it if things change; I feel like I just can't cope with anything. A B C D E

45. No matter what I achieve, I feel thoroughly worthless. A B C D E

46. There is little that anyone can do that affects me one way or the other. A B C D E

47. If I'm working on a committee or with a group of people trying to solve a problem, I find I really tend to take matters into my own hands. A B C D E

48. Sometimes I seem hell bent for trouble because of my wild behavior but I am unable to control myself. A B C D E

49. I tend to have many friendly contacts rather than a few close friends. A B C D E

50. I consider myself to be independent, but I am willing to listen to and accept advice from people I respect. A B C D E

APPENDIX B (CONT.)

SCORING FORM FOR ESS

Name of Patient_____

Date_____

IMPULSE CONTROL

1.	Obsessive	Item	A	B	C	D	E	Raw Score	2.	Impulsive	Item	A	B	C	D	E	Raw Score
		8	4	3	2	1	0				15	4	3	2	1	0	
		21	4	3	2	1	0				30	4	3	2	1	0	
		36	4	3	2	1	0				40	4	3	2	1	0	
		39	4	3	2	1	0				48	4	3	2	1	0	
					Totals			_____						Totals			_____

INTERPERSONAL RELATIONS

3.	Intrusive	Item	A	B	C	D	E	Raw Score	4.	Isolated	Item	A	B	C	D	E	Raw Score
		6	4	3	2	1	0				2	4	3	2	1	0	
		22	4	3	2	1	0				12	4	3	2	1	0	
		33	4	3	2	1	0				24	4	3	2	1	0	
		49	4	3	2	1	0				41	4	3	2	1	0	
					Totals			_____						Totals			_____

AUTONOMY

5.	Defiant	Item	A	B	C	D	E	Raw Score	6.	Helpless	Item	A	B	C	D	E	Raw Score
		14	4	3	2	1	0				9	4	3	2	1	0	
		28	4	3	2	1	0				17	4	3	2	1	0	
		38	4	3	2	1	0				25	4	3	2	1	0	
		47	4	3	2	1	0				34	4	3	2	1	0	
					Totals			_____						Totals			_____

FRUSTRATION TOLERANCE

7. Guarded	Item	A	B	C	D	E	Raw Score
	7	4	3	2	1	0	
	29	4	3	2	1	0	
	37	4	3	2	1	0	
	46	4	3	2	1	0	
				Totals			_____

8. Vulnerable	Item	A	B	C	D	E	Raw Score
	4	4	3	2	1	0	
	18	4	3	2	1	0	
	32	4	3	2	1	0	
	44	4	3	2	1	0	
				Totals			_____

SELF-ESTEEM

9. Grandiose	Item	A	B	C	D	E	Raw Score
	11	4	3	2	1	0	
	20	4	3	2	1	0	
	31	4	3	2	1	0	
	42	4	3	2	1	0	
				Totals			_____

10. Worthless	Item	A	B	C	D	E	Raw Score
	5	4	3	2	1	0	
	16	4	3	2	1	0	
	19	4	3	2	1	0	
	45	4	3	2	1	0	
				Totals			_____

Total Ego Weakness Score (sum 10 concepts) _____

Total of Concepts 3+5+7+9 ("hard" defensive signs) _____

Total of Concepts 4+6+8+10 ("soft" fragile signs) _____

Impulse Control (circle one) High Obsessive Both Low
High Impulsive Both High

EGO STRENGTH

Item	A	B	C	D	E	Raw Score
1	4	3	2	1	0	
3	4	3	2	1	0	
10	4	3	2	1	0	
13	4	3	2	1	0	
23	4	3	2	1	0	
26	4	3	2	1	0	
27	4	3	2	1	0	
35	4	3	2	1	0	
43	4	3	2	1	0	
50	4	3	2	1	0	
			Totals			_____

APPENDIX C

BIOGRAPHICAL INFORMATION FORM

Confidential

Name_____
Hospital No._____
Hospital_____

1. What has been your most usual occupation as an adult?

_____

Please be as specific as possible; include the type of work and the institution for which you worked. For example, accountant for a small business firm; account for a large company.

2. What is your average annual earnings from this occupation:

_____

3. What has been your spouse's most usual occupation as an adult?

_____

4. What is your spouse's average annual earnings from this occupation?

_____

5. How many years of formal education did your father have?

_____

6. What was your father's most usual occupation while you were growing up?_____
Please be as specific as possible.

7. How many years of formal education did your mother have?

_____

8. What was your mother's most usual occupation while you were growing up? Indicate "Housewife" only if your mother had NO outside employment.

_____

9. If other than "Housewife," approximately how many years was she employed?_____

10. As best you can remember, what was your first full-time regular job after training or education?_____
Be specific.

11. How long were you employed in that job?_____

12. What was your spouse's first full-time regular job after training or education?_____

13. How long did your spouse have that job?_____

14. How long have you been at your present occupation?_____

15. How long has your spouse been at his or her present occupation?

_____

16. How many years of formal education do you have?_____

17. How many years of formal education has your spouse had?_____

18. Ages, sex, and occupations of children:

Ages	Sex	Occupations (Full-time or Part-time)

19. Number of people living in household (including self and spouse)?

_____

20. In what order were you born in your family? (e.g., 1st, 2nd, 3rd)

_____

21. Previous hospitalization:
Number of times hospitalized_____
Length of time since last hospitalization_____

22. Generation American:
1st_____
2nd_____

23. Have you ever been on amphetamines or taken diet pills?_____

Other confidential information to be obtained from patient chart:

24. Medication taken today _____

_____

_____

25. Diagnosis _____

_____

Condition _____

26. Health of patient's family members (parents, siblings)

_____

_____

_____

27. Illness history

APPENDIX D

LETTERS OF PERMISSION

C
O
P
Y

THE WALTHAM HOSPITAL
Hope Avenue, Waltham, Massachusetts 02154 (617) 899-3300

Serving Waltham, Weston, Watertown

Sandra L. Scheetz, R.N.
1418 S 1100 East, No. 5
Salt Lake City, Utah 84105

Dear Ms. Scheetz:

You have my permission to use the Jacobs Ego Strength Scale as a research instrument and to reproduce as many copies as necessary to carry out this project.

Sincerely,

(Signed)
Martin A. Jacobs, Ph.D.
Chief Clinical Psychologist

MAJ/wbc

C
O
P
Y

UNIVERSITY OF WASHINGTON
Seattle, Washington 98195

School of Medicine
Department of Psychiatry and Behavioral Sciences

October 23, 1973

Ms. Sandra L. Scheetz, R.N.
Department of Psychiatric Nursing
College of Nursing
University of Utah
Salt Lake City, Utah 84112

Order for Opscan version of Schedule of Recent Experience (SRE)

2 packages of SRE Booklets (20)	$ 5.00
4 packages of SRE answer Sheets (200)	24.00
Instructions for hand scoring (no charge)	
Preprint "Life Change and Illness Susceptibility" (already sent)	1.00
Total	$ 30.00

PAID IN FULL

$15.50 and $14.50 checks

VITA

Name	Sandra Louise Scheetz
Birthplace	Mitchell, South Dakota
Birthdate	April 13, 1949
High School	Mitchell Senior High School Mitchell, South Dakota
School of Nursing	Fort Wayne Lutheran Hospital School of Nursing Fort Wayne, Indiana, 1967-1968
University	University of Wyoming Laramie, Wyoming, 1968-1971
College	Black Hills State College Summer, 1969
Degree	B.S., University of Wyoming Laramie, Wyoming, 1971
License	Registered Nurse, Wyoming License Utah License
Professional Organizations	American Nurses Association Wyoming State Nurses Association Sigma Theta Tau, Nursing Honorary
Professional Positions	Staff Nurse, Veterans' Administration Hospital, Cheyenne, Wyoming, 1971-1972 Latter-day Saints Hospital, Salt Lake City, Utah 1972-1973, 1973-1974; Instructor, University of Wyoming School of Nursing, Evanston, Wyoming, Summer, 1973